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IN THE  
**Supreme Court of the United States**  
OCTOBER TERM, 1995

WARNER-JENKINSON COMPANY, INC.,  
*Petitioner,*  
v.

HILTON DAVIS CHEMICAL CO.,  
*Respondent.*

On Writ of Certiorari to the  
United States Court of Appeals  
for the Federal Circuit

**BRIEF AMICUS CURIAE OF  
INTELLECTUAL PROPERTY OWNERS  
IN SUPPORT OF PETITIONER**

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**BRIEF AMICUS CURIAE OF  
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**INTEREST OF AMICUS CURIAE**

The Intellectual Property Owners ("IPO") is a national organization founded in 1972 which represents the interests of owners of intellectual property in the United States. IPO's members currently include nearly 100 large and mid-size companies and more than 300 small businesses, universities, independent inventors, authors, executives and attorneys who own or are interested in patents, trademarks, copyrights and other intellectual property rights. In 1995, IPO members received about 30 percent of the patents issued by the United States Patent and Trademark Office to United States nationals. Members of IPO's Board of Directors, which approved the position set forth in this *amicus* brief, are listed in the Appendix



to this brief.<sup>1</sup> IPO is a non-profit association exempt from federal income tax under Internal Revenue Code § 501 (c)(6).

Although neither IPO nor any of its members has a direct interest in the outcome of this case, IPO and its members have a substantial interest in the problem this case presents: the lack of certainty in the law on non-literal patent infringement. IPO's members, as patent owners and assignees themselves, and as participants in technologically competitive industries, frequently must determine the scope of protected patent rights—both their own and others—as they make decisions about developing and protecting new technologies. Unfortunately, modern application of the doctrine of equivalents has made this determination an unduly hazardous enterprise. Consequently, IPO members are unable to predict with any reasonable degree of certainty the potential legal significance of technological innovations or improvements or the risk of liability associated with developing new products.

IPO does not believe that the proper judicial response to the problems that modern patent law has spawned lies in abandoning the equivalents doctrine wholesale. Indeed, this course of action is foreclosed by Congress's ratification of the longstanding doctrine when, in 1952, Congress reenacted without change the law of infringement. IPO, however, believes that the doctrine needs to be returned to its original roots as a means of protecting the rights of patentees by condemning insubstantial deviations from the patent claims. IPO also believes that consistency in the application of the doctrine—and the legal and economic certainty such consistency provides—can be achieved only if the doctrine is once again employed as a part of patent claim construction by the courts, based on objective factors such as the

<sup>1</sup> Pursuant to Rule 37.3 of the Rules of this Court, letters of consent to the filing of this brief have been filed with the Clerk of the Court.

prosecution history and prior art. As the result in this case demonstrates, predictability and consistency simply cannot be expected if equivalence determinations are based on lay juries' unguided assessments of the substantiality of differences between the literal requirements of patents and accused devices or methods. By returning the doctrine to its original scope and role, intellectual property rights will retain comprehensive legal protection, which Congress clearly intended, but competitors will be able to measure those rights more precisely and with less risk of a *post hoc*, layman's determination that there has been a violation of the patent's claims.

### INTRODUCTION AND SUMMARY OF ARGUMENT

Section 271(a) of Title 35 defines infringement as the unauthorized making, using or selling of "any patented invention." 35 U.S.C. § 271(a), *as amended by Act of Dec. 8, 1994*. IPO disagrees with the suggestion, made by petitioner in its petition for a writ of certiorari ("Pet."), that the doctrine of equivalents is an "extra statutory" "second cause of action for infringement" (Pet. 28, 17) that is "inconsistent not only with the text of the Patent Act but with well-established statutory policy as well." *Id.* at 22. To the contrary, the doctrine is a longstanding and congressionally accepted method of determining whether an accused infringer is in fact making, using or selling a "patented invention."

The doctrine of equivalents developed in conjunction with the statutory requirement that patents include claims that particularly point out and distinctly claim the subject matter of the invention and is entirely consistent with this "claiming" requirement. As developed by this Court, the doctrine fully protects patent claims, but prohibits expansion of the scope of the patented invention. When Congress added § 271(a)'s proscription of infringement in the 1952 Patent Act, it left this century-old doctrine and its role in determining direct infringement completely undisturbed.

Indeed, Congress evinced its awareness and endorsement of the doctrine in § 112 of the 1952 Patent Act. In that provision, Congress authorized the granting of patent claims that recite an element in a combination as an unspecified "means or step" for performing a function, without any recital of the structure, material or acts that support those means or steps. 35 U.S.C. § 112, ¶ 6. Overruling this Court's decision in *Halliburton Oil Well Cementing Co. v. Walker*, 329 U.S. 1 (1946), that such claims were impermissibly vague, Congress provided that a claim employing such open-ended language "shall be construed to cover the corresponding structure, material, or acts described in the specification *and equivalents thereof*." 35 U.S.C. § 112, ¶ 6 (emphasis added). Congress thus expressly recognized that "equivalence" is a proper part of construing claim language. It would be improper to hold that Congress endorsed the doctrine of equivalents for the construction of facially vague claim language, yet (without a single indication that it was doing so) eliminated the doctrine's century long role in construing all other claims.

IPO does agree with petitioner, however, that modern application of this longstanding doctrine has engendered uncertainty that undermines the congressional and constitutional purposes underlying the patent laws. The solution to these problems lies not in abandoning the doctrine, however, but in making its application, both substantively and procedurally, more certain. Substantively, the doctrine's historical origins as a measure of the protected rights of the patentee make clear that determinations of equivalence should be governed by the same objective considerations that govern claim construction. Thus, the determination of whether a variation from the literal requirements of a claim is substantial or insubstantial must be made with the understanding of one of ordinary skill in the relevant art in light of the breadth and clarity of the claim language, the specification, the patent prosecution history, the prior art (and the patent's

status within it), and the obviousness of substituting the accused element for that recited in the claim. Procedurally, like the question of claim construction itself, the determination of equivalence ordinarily should be made by a court, not by a jury.

In order to bring the same level of certainty to determinations of equivalence that inheres in any "literal" infringement analysis, subjective factors that do not bear on the scope of the invention itself, such as the motivation of an accused infringer, should play no role. Only by excluding subjective factors can both patent holders and inventors seeking to avoid infringement determine how to proceed based on readily available, objective information. Such a rule is also consistent with the historical development of the doctrine of equivalents as a mode of claim construction, rather than an equitable remedy. Thus, while intent may be a relevant consideration in assessing the proper level of damages, it is irrelevant to a determination of liability.

## ARGUMENT

### I. A PATENT IS INFRINGED WITHIN THE MEANING OF 35 U.S.C. § 271 WHEN A PARTY "MAKES, USES OR SELLS" A DEVICE OR METHOD THAT DOES NOT DIFFER FROM THE PATENTED INVENTION IN ANY SUBSTANTIAL WAY.

Petitioner suggests in its petition that the doctrine of equivalents is an "extra statutory" "second cause of action for infringement." Pet. 28, 17. First added to the patent laws in 1952, and subsequently amended in 1994, § 271(a) defines infringement as follows:

Except as otherwise provided in this title, whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.



35 U.S.C. § 271(a). The statute does not, by its express terms, proscribe only "literal" infringement, nor does it prohibit merely the infringement of "patent claims." Indeed, as the majority below noted (Pet. 22), § 271(a) does not mention patent "claims" at all. Similarly, the statute does not, by its terms, foreclose infringement by equivalents, despite the fact that the doctrine was well established prior to 1952.

In asserting that infringement by equivalents nevertheless falls outside the prohibition of § 271(a), petitioner relies on the statutory requirements that each patent application include a "specification" (35 U.S.C. § 111), and that each such specification "conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." 35 U.S.C. § 112, ¶ 2. Because the claims define the "patented invention," petitioner suggests that infringement occurs only where the unauthorized manufacture, use, or sale of a "patented invention" satisfies the literal requirements of the claims. Thus, petitioner argues, the doctrine of equivalents provides protection "for more than is set forth in the claims." Pet. 22.

The suggestion that the doctrine of equivalents is inconsistent with the "claiming requirement" of § 112 is historically inaccurate, and rests on the mistaken assumption that patent claims always have clear and unequivocal "literal" meanings that the doctrine is used to "expand." Inventions often involve complex technical concepts that typically "exist[] most importantly as a tangible structure or a series of drawings," (*Autogiro Co. of Am. v. United States*, 384 F.2d 391, 397 (Ct. Cl. 1967), *cert. denied*, 434 U.S. 1051 (1978)), and the claims that attempt to capture these concepts are drafted against a backdrop of prior art in the field of technology to which they relate. As a result, the meaning and scope of patent claims is derived through a process of claim "construction" not dissimilar to judicial construction of statutes, and indeed

"the inability of words to achieve precision is . . . more acute with claims" than it is with statutes. *Id.* at 398.

Given the often unavoidable ambiguity of claim language, the necessity of construing claims has existed since Congress introduced the requirement of patent claims in 1836. The doctrine of equivalents, which has the same historical lineage, developed as part of this process of claim construction and, properly understood and applied, relies on essentially the same interpretive tools that are employed in determining literal infringement. It is clear that in the 1952 Patent Act passed a century later, Congress left the doctrine of equivalents, and its essential role in construing patent claims, undisturbed.

**A. The Doctrine Of Equivalents Developed In Conjunction With The Statutory Claiming Requirement As An Aid To Construing The Scope And Meaning Of Patent Claims.**

More often than not, a defendant in a patent infringement suit will point to some difference between its method or device and the patent claims and the question will arise: "is that difference substantial?" The doctrine of equivalents is nothing more or less than the tool developed by the judiciary to answer this basic question. Cognizant of the limits of verbalism (particularly in the area of scientific endeavor), this Court developed the doctrine "to benefit the inventor's genius and not the scrivener's talents" (*Autogiro*, 384 F.2d at 399), and thereby to prevent the elevation of form over substance. The doctrine is thus predicated on the recognition "'that the substantial equivalent of a thing, in the sense of the patent law, is the same as the thing itself.'" *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30, 42 (1929) (quoting *Machine Co. v. Murphy*, 97 U.S. 120, 125 (1877)).

Consistent with these intellectual underpinnings, the doctrine developed not as an equitable remedy that allowed courts to reform or amend patent claims, but



rather as a way of construing claims to determine their proper scope and meaning. Beginning with its first recognition of the doctrine in the 1853 decision of *Winans v. Denmead*, 56 U.S. (15 How.) 330 (1853), this Court has viewed equivalence as a determination of whether a "claim . . . can fairly be construed" as encompassing a particular accused element or process. *Id.* at 341. The doctrine is thus an aid in determining "the fair meaning of [the claim's] language when taken in connection with the whole specification," and a finding of equivalence reflects the determination that "[a] literal construction is not to be adopted [because] it would be repugnant to the manifest sense and reason of the instrument." *The Corn-Planter Patent*, 90 U.S. (23 Wall.) 181, 221 (1874); see also *Hobbs v. Beach*, 180 U.S. 383, 400 (1901) ("another construction, which would limit these words to the exact mechanism described in the patent, would be so obviously unjust that no court could be expected to adopt it").

From the time of the *Winans* decision until the passage of the 1952 Patent Act, this Court repeatedly applied the doctrine, both to uphold and reject claims of infringement.<sup>2</sup> The suggestion that this Court adopted the

<sup>2</sup> See, e.g., *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605 (1950); *Schriber-Schroth Co. v. Cleveland Trust Co.*, 311 U.S. 211 (1940); *Keystone Driller Co. v. Northwest Eng'g Corp.*, 294 U.S. 42 (1935); *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30 (1929); *Singer Mfg. Co. v. Cramer*, 192 U.S. 265 (1904); *Coupe v. Royer*, 155 U.S. 565 (1895); *Belding Mfg. Co. v. Challenge Corn Planter Co.*, 152 U.S. 100 (1894); *Royer v. Schultz Belting Co.*, 135 U.S. 319 (1890); *Duff v. Sterling Pump Co.*, 107 U.S. 636 (1882); *Imhaeuser v. Buerk*, 101 U.S. 647 (1879); *Machine Co. v. Murphy*, 97 U.S. 120, 125 (1877); *Ives v. Hamilton*, 92 U.S. 426 (1875); *Sewell v. Jones*, 91 U.S. 171 (1875); *Roberts v. Ryer*, 91 U.S. 150 (1875); *The Corn-Planter Patent*, 90 U.S. (23 Wall.) 181 (1874); *Gill v. Wells*, 89 U.S. (22 Wal.) 1 (1874); *Gould v. Rees*, 82 U.S. (15 Wall.) 187 (1872); *Seymour v. Osbourne*, 78 U.S. (11 Wall.) 516 (1870); *Tyler v. Boston*, 74 U.S. (7 Wall.) 327, 330-31 (1868); *Case v. Brown*, 69 U.S. (2 Wall.) 320 (1864);

doctrine prior to the enactment of a statutory claiming requirement (Pet. 27), and then thoughtlessly perpetuated the doctrine despite a fundamental change in the statutory regime governing patent drafting, is historically inaccurate.<sup>3</sup> The requirement that patents include claims that specify the scope of an invention dates not from the Patent Act of 1870, but, as this Court long ago recognized, from language first added to the patent statute in 1836. "[S]ince the act of 1836, the patent laws require that an applicant for a patent shall not only, by a specification in writing, fully explain his invention, but that he 'shall particularly specify and point out . . . his own invention or discovery.'" *Keystone Bridge Co. v. Phoenix Iron Co.*, 95 U.S. 274, 278 (1877).<sup>4</sup> The 1870 statute's requirement that the inventor "particularly point out and

*Burr v. Duryee*, 68 U.S. (1 Wall.) 531 (1863); *McCormick v. Talcott*, 61 U.S. (20 How.) 402 (1857).

<sup>3</sup> In fact, well over 50 years ago this Court was asked to find that the doctrine of equivalents was "incompatible with the statutory requirements for the grant of a patent." *Exhibit Supply Co. v. Ace Patents Corp.*, 315 U.S. 126, 131-32 (1942). The Court specifically declined to address this contention (*id.* at 136), and continued to apply the doctrine. See, e.g., *Graver Tank*, 339 U.S. 605.

<sup>4</sup> The 1836 Patent Act stated, in relevant part:

[A]ny person or persons having discovered or invented . . . any new and useful improvement . . . may make application in writing to the Commissioner of Patents. . . . But before any inventor shall receive a patent for any such new invention or discovery, he shall deliver a written description of his invention or discovery . . . in such full, clear, and exact terms, avoiding unnecessary prolixity, as to enable any person skilled in the art or science to which it appertains . . . to make, construct, compound, and use the same; and in case of any machine, he shall fully explain the principle and the several modes in which he has contemplated the application of that principle . . . ; and shall particularly specify and point out the part, improvement, or combination, which he claims as his own invention or discovery.

Patent Act of July 4, 1836, ch. 356, § 6, 5 Stat. 117, 119 (1836) (emphasis added).

distinctly claim the part, improvement, or combination which he claims as his invention or discovery," Act of July 8, 1870, ch. 230, § 26, 16 Stat. 198, 201 (1870), is essentially the same as the requirement set forth in its 1836 predecessor.<sup>5</sup> See John W. Schlicher, *Patent Law: Legal and Economic Principles* § 7.04[5], at 7-44 (1995) ("After 1870, the form of patent claims did not change dramatically."). The modern claiming requirement is consistent with both the 1836 and 1870 statutes: "The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." 35 U.S.C. § 112.

Thus, as propounded by this Court, the doctrine of equivalents has always co-existed with the requirement that patents include claims that specify the scope of an invention, and has developed as an integral aspect in construing the scope and meaning of such claims.<sup>6</sup> Prior to

<sup>5</sup> Additionally, there is no support in the legislative history of the 1870 statute for petitioner's suggestion that Congress fundamentally changed the U.S. patent law from a "central claiming" system to a "peripheral claiming" system. Pet. 27 n.25. During House debates on the 1870 bill, which was reported from the Committee on Patents, a Committee member stated:

The propositions submitted by the committee are few, clear, definite, and precise in their language. . . .

The committee have also considered the effect of the proposed revision upon all existing legal rights, and . . . they have carefully preserved every existing right. . . . That is the principle by which the committee has been governed in offering amendments to the bill and also in considering the report of the commissioners of revision. Their object has been, not to disturb any existing rights or to take away any remedies, but to enlarge the remedies in every case where they could do so consistently with the principle of the law.

Cong. Globe, 41st Cong., 2d Sess. 2854 (1870).

<sup>6</sup> Of course, in some cases claim language is so clear and unambiguous that it forecloses infringement by equivalents. See, e.g., *Keystone Bridge*, 95 U.S. 274; *White v. Dunbar*, 119 U.S. 47 (1886). While both decisions are frequently cited by those seeking

the 1952 Patent Act, infringement by equivalents was an established and well developed basis of patent infringement supported by a substantial body of case law. It is indisputably clear that Congress did not in any way disturb this well-settled doctrine when, in 1952, it made the ministerial change in the patent laws that added § 271(a).

**B. The 1952 Patent Act Made No Change In The Law Of Infringement And Left The Doctrine Of Equivalents Intact.**

Section 271(a) of Title 35 U.S.C. was first added to the statute by the Patent Act of 1952, ch. 950, 66 Stat. 811. In adding this provision, Congress did not eliminate, narrow or otherwise change the doctrine of equivalents or in any way disapprove the longstanding principle it reflects—that, properly construed, patents encompass devices or methods that differ from the claims in only insubstantial ways. To the contrary, as this Court noted in *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336 (1961), section 271(a) "left intact the entire body of case law on direct infringement" (*id.* at 342) and in fact was nothing more than a "'declaratory' provision 'adopted 'for completeness.'"<sup>7</sup> *Id.* at 342 n.8 (quoting the reviser's notes, 35 U.S.C.A., following § 271, and Federico, Commentary on the New Patent Act, 35 U.S.C.A., preceding § 1, at p. 51).<sup>7</sup> Justice Black, a dissenter in *Graver Tank*, agreed, stating:

to cast doubt on the doctrine (*see* Pet. 24; Brief for United States as *Amicus Curiae*, *Standard Indus. v. Tigrett Indus.*, No. 445 (October Term 1969) 8, 10, 21 (cited in Pet. 18)), it was the clarity of the claim language, and not any renunciation or disparagement of the doctrine of equivalents, that accounts for the decisions. Indeed, the author of both decisions, Justice Bradley, applied the doctrine in cases subsequent to *Keystone Bridge*. See *Water-Meter Co. v. Desper*, 101 U.S. 332, 337 (1879) ("We can only decide whether any part omitted by an alleged infringer is supplied by some other device or instrumentality which is its equivalent. We think no such equivalent is supplied in this case.").

<sup>7</sup> The Court referred to "direct" infringement only to distinguish it from "contributory" infringement, which was also at issue in



If anyone is inclined despite other evidence to the contrary to attribute to Congress a purpose to accomplish any far-reaching changes in the substantive law by this [1952] enactment, he should take note that just before the bill was passed in the Senate, Senator Saltonstall asked on the floor, 'Does the bill change the law in any way or only codify the present patent laws?' Senator McCarran, Chairman of the Judiciary Committee which had been in charge of the bill for the Senate, replied, 'It codifies the present patent laws.'

*Aro Mfg.*, 365 U.S. at 347 n.2 (Black, J., concurring) (quoting 98 Cong. Rec. 9323 (July 4, 1952)).

The Senate Report accompanying the bill explained that the 1952 Act made only two "major" changes in the patent laws—"incorporating a requirement for invention in § 103 and the judicial doctrine of contributory infringement in § 271." S. Rep. No. 1979, 82d Cong., 2d Sess. (1952), reprinted in 1952 U.S.C.C.A.N. 2394, 2397. Contemporary analyses agreed with this Court that the 1952 Act, including § 271(a), worked no change in the law of infringement. See, e.g., Giles S. Rich, *Infringement Under Section 271 of the Patent Act of 1952*, 35 J. Pat. Off. Soc'y 476, 491 (July 1953) (§ 271(a) "is present only for the sake of completeness. We got along without it for 162 years and we could again"); Dean O. S. Colclough, *A New Patent Act—But the Same Basic Problem*, 35 J. Pat. Off. Soc'y 501, 508 (July 1953) ("from a careful reading of the 1952 Act, [it may be said] that Congress has not changed the law basically"). It is simply inconceivable that, without mentioning that it was doing so, Congress swept aside a century of this Court's decisions defining infringement by

the case. See *Aro Mfg.*, 365 U.S. at 341-42; see also Giles S. Rich, *Infringement Under Section 271 of the Patent Act of 1952*, 35 J. Pat. Off. Soc'y 476, 491 (July 1953) (§ 271(a) "defines direct infringement"); cf. 35 U.S.C. § 271(d) (patent holder entitled to relief for "infringement or contributory infringement").

equivalents. See *Midlantic Nat'l Bank v. New Jersey Dept. of Envtl. Protection*, 474 U.S. 494, 501 (1986) ("The normal rule of statutory construction is that if Congress intends for legislation to change the interpretation of a judicially created concept, it makes that intent specific.")<sup>8</sup> Indeed, there is not a shred of evidence that Congress intended to bar only literal duplication of patented devices or methods, and to strip patentees of protection against accused devices or methods that differ in merely colorable but not substantial ways.

Nor can such a fundamental change in the law of infringement be derived from the fact that Congress added the concept of equivalents to § 112 as a basis for sustaining previously unsustainable "means" claims—i.e., those that simply state "means for performing" a specified function.<sup>9</sup> In fact, if § 112 proves anything, it is that Congress was aware of, and endorsed, the doctrine of equivalents. Section 112, ¶ 6 provides:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

35 U.S.C. § 112, ¶ 6 (emphasis added). The purpose of this provision was to restore to patent holders the ability to use broad "means plus function" language in their claims, which this Court had condemned as unduly vague in *Halliburton Oil Well Cementing Co. v. Walker*, 329

<sup>8</sup> If, as some suggest, the doctrine was controversial at the time of the 1952 Act (see Pet. App. 102a n.9 (Nies, J., dissenting) (quoting Department of Justice statement during House hearings on the legislation)), it is all the more implausible that Congress resolved the controversy without uttering a single word on the subject.

<sup>9</sup> Cf. Pet. 14; Pet. App. 102a-103a.

U.S. 1 (1946).<sup>10</sup> In so doing, Congress did not cabin the doctrine of equivalents to this single category of previously impermissible patent claims. Rather, it extended the doctrine's application to an entirely new area. Before § 112, ¶ 6, the doctrine had been used only to determine whether an accused device or process was equivalent to *claim elements*; in order to save open-ended claim language from undue vagueness, § 112, ¶ 6 extended the doctrine to a determination of whether an accused device or process was equivalent not to a claim element, but to the "structure, material, or acts described in the specification."

This statutory provision thus demonstrates that Congress was well aware of the doctrine of equivalents and its role in construing claim language, and adapted the doctrine to a new purpose: salvaging vague claim language by extending the consideration of equivalents to acts or devices disclosed in specifications. There simply is no basis for concluding that, by affording this new protection to patentees, Congress *sub silentio* stripped inventors of protection against the appropriation of their inventions through insubstantial changes. A contrary conclusion, moreover, would lead to the perverse result that patentees who employ the vaguest claim language would be afforded the benefits of the doctrine of equivalents, while those who attempt particularly to point out and distinctly to claim their inventions (as well as those who employ

<sup>10</sup> *Patent Law Codification and Revision: Hearings on H.R. 3760 Before Subcomm. No. 3 of the Comm. on the Judiciary, 82d Cong., 1st Sess. 45 (1951) (Report of the Laws and Rules Comm. of the American Patent Law Ass'n on H.R. 3780, 82d Cong.)* ("[s]ection 112 in the last paragraph recognizes the validity of combination claims wherein the novelty is expressed in functional terms and . . . offset[s] the much criticized theory of the *Halliburton* case"). See also Clarence B. Des Jardins, *The Year 1952 and the Patent and Trade-Mark Law*, 35 J. Pat. Off. Soc'y 517, 529 (July 1953) (§ 112 "is a statutory overruling of the *Halliburton* case").

single element claims) are deprived of the doctrine's benefits. Such a result cannot be sustained in the absence of any evidence that Congress intended it.

Finally, advocates for the abolition of the doctrine of equivalents argue that it defeats the notice purposes of the claiming requirement. The short answer is that this policy argument provides no basis for eliminating a judicial construction of a statute that Congress left undisturbed in both 1952 and 42 years later when it amended § 271(a).<sup>11</sup> See *Square D. Co. v. Niagara Frontier Tariff Bureau, Inc.*, 476 U.S. 409, 419, 421-22 (1986) (upholding "continued viability" of prior case law that "represents a longstanding statutory construction that Congress has consistently refused to disturb, even when revisiting this specific area of law"). The more complete answer, discussed below, is that it is not the doctrine of equivalents itself, but its modern application by juries, that has undermined the goal of providing notice to the world of where the boundaries of patents lie. This is a problem this Court can and should address, by confining the doctrine to its original purpose.

## II. THE SCOPE OF AN INVENTION SHOULD BE DETERMINED BY THE SAME OBJECTIVE FACTORS USED TO CONSTRUE CLAIMS IN ANY LITERAL INFRINGEMENT ANALYSIS.

The doctrine of equivalents, borne from the necessity to provide full protection to inventors, has not been applied in a clear and consistent manner. In large measure this confusion has arisen because lower courts have departed from this Court's carefully drawn standards for

<sup>11</sup> The 1994 amendment added the following language to § 271(a): "Except as otherwise provided in this title, whoever without authority makes, uses, *offers to sell*, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent." 35 U.S.C. § 271a (emphases added).



determining equivalence and substituted a simple incantation of "function-way-result." The majority below correctly rejected the function-way-result test as the only proper determinant of equivalence, and properly identified "substantiality" as the appropriate focus. The majority erred, however, in not tying the determination of substantiality to the factors that governed such judgments prior to 1952. These factors, all of which must be viewed from the perspective of one of ordinary skill in the relevant art, are the clarity and breadth of the claim language, the specification, the patent prosecution history, the prior art, and the obviousness of the substitution. The majority below further erred in vesting responsibility for such determinations with juries, rather than courts. Under the proper test, it is clear that the judgment below must be reversed.

**A. Undue Reliance On, And A Wooden Application Of, The Function-Way-Result Test Has Led To Unpredictable Results.**

In its oft-cited decision in *Graver Tank*, this Court upheld a finding of equivalence based on "the disclosures of the prior art," the fact that "[s]pecialists . . . understood that manganese was equivalent to and could be substituted for magnesium in the composition of the patented" process, and the testimony of experts in the field that, "in the sense of the patent" manganese could be included" within the scope of the patent's terms. 339 U.S. at 611-12 (citation omitted). In the years following this decision, however, this careful consideration of such factors was ignored in favor of the Court's pithy recitation of the so-called "function-way-result" test. Used as a shorthand in *Graver Tank*, the test took on a life of its own, but has proved to be largely inadequate as a methodology for determining the scope of an invention. For example, as Judge Lourie pointed out in his dissent below, "one normally knows why each electronic or mechanical element is present in a product and what it does." Pet. App. 74a (Lourie, J., dissenting). By contrast:

New chemical compounds differ structurally from old compounds (that is what makes them new) and yet they may perform the same function (have the same use), provide the same result, and do so in the same way. The fact that they do so in the same way does not make them substantially the same in the way they are defined, *i.e.*, by structure.

*Id.* at 73a. Judge Lourie's illustration indicates that the function-way-result test has been overextended as applied beyond simple mechanical or electrical structures and processes.<sup>12</sup>

In fact, the function-way-result test, something of an anachronism in a modern era of highly technical, complex invention, was never intended to serve as a talisman for equivalence determinations. As Judge Learned Hand once observed: "The usual ritual, which is so often repeated and which has so little meaning, that the same result must follow by substantially the same means, does not help much in application; it is no more than a way of stating the problem." *Claude Neon Lights, Inc. v. E. Machlett & Son*, 36 F.2d 574, 576 (2d Cir. 1929), *cert. denied*, 281 U.S. 741 (1930). Movement away from the reflexive and wooden application of this test, which has led to unpredictable results, is the first step toward bringing much needed certainty to the law of infringement. As one commentator has stated in comparing the analyses for obviousness and equivalence: "The current obviousness analysis based on objective criteria provides judicial opinions properly based on relevant facts. The doctrine of equivalents should likewise consistently require analysis of objective facts . . . to avoid the uncertainty presently

<sup>12</sup> One commentator opined that Justice Black's dissent in *Graver Tank*, which predicted that manufacturers would not be able to rely on claim language, "seem[ed] less foreboding, at least in respect to mechanical and electrical cases." Arthur H. Swanson, *A Discussion of the Application of the Doctrine of Equivalents in the Graver v. Linde Case*, 33 J. Pat. Off. Soc'y 19, 29 (Jan. 1951).

surrounding its application." Stephen G. Kalinchack, *Obviousness and the Doctrine of Equivalents in Patent Law: Striving for Objective Criteria*, 43 Cath. U. L. Rev. 577, 606 (1994).

The majority below seemingly took this first step by declaring that function-way-result is not "the" test of equivalence (Pet. App. 9a), and that the ultimate determinant must be the substantiality of the differences between the accused device or method and the literal terms of the patent claims. *Id.* at 7a-9a. Indeed, the majority explained that "the vantage point of one of ordinary skill in the art provides the proper perspective for assessing the substantiality of the differences." *Id.* at 10a. Inexplicably, however, the majority upheld a jury verdict of infringement in which, as it candidly acknowledged, "the only available evidence going to the substantiality of the differences" was "evidence of function, way, result," and in which the jury received no further guidance for determining whether a person of skill in the art would deem the difference between pH values of 5.0 and 6.0 substantial.

Plainly, competitors cannot reasonably or predictably determine the scope of protected patent rights when such rights are ultimately based on a lay jury's unguided assessment of whether there is "a nickel's worth of difference" between an accused device or process and the literal terms of a patent claim. Pet. App. 21a n.3 (quoting respondent's closing argument as evidence that the jury was "properly focused . . . in applying the doctrine of equivalents"). Rather, competitors and patentees can only make reasoned business judgments if the objective considerations that previously governed the doctrine of equivalents, and continue today to govern claim construction generally (see *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979-81 (Fed. Cir.) (listing factors), *cert. granted*, 116 S. Ct. 40 (Sept. 27, 1995) (argued Jan. 8, 1996)), are once again consistently employed. Under such an objective regime as determined by a court,

in addition to interpreting the patent claims and specification with the understanding of one of ordinary skill in the art, consideration would be given to the prosecution history, prior art, and the existence of obvious substitutes. Once an invention's scope is defined based on these objective criteria, a factual comparison of the accused device to the patented device will determine the existence of infringement by equivalents.

**B. A Determination Of Equivalence Should Be Based On (1) The Clarity And Breadth Of The Claim Language; (2) The Prosecution History; (3) The Prior Art And The Invention's Status Within That Art; And (4) The Existence Of Obvious Substitutes.**

**1. Clarity and breadth of the claim language should be a significant guide to determining equivalence.**

As with statutes, the process of claim construction must begin with the language of the claims itself. The analogy of statutory construction, however, must be tempered by the recognition that claims are drafted by and for inventors and must speak not to judges or the public at large, but to those of skill in the relevant field of art. "The lucidity of a claim is determined in light of what ideas it is trying to convey. Only by knowing the idea, can one decide how much shadow encumbers the reality." *Autogiro*, 384 F.2d at 396.

With its decision in *Winans*, this Court recognized the basic principle of claim construction that a patentee may use language so precise and unambiguous to "restrict his claim as to cover less than what he invented, or [to] limit it to one particular form . . . , excluding all other use language so precise and unambiguous to "restrict forms." *Winans v. Denmead*, 56 U.S. (15 How.) 330, 341 (1853). Since *Winans*, the Court also has acknowledged that, by claiming a combination of elements or parts, the patentee may render each such element or part material, and a court therefore "cannot declare that any one of these elements is immaterial." *Water-Meter Co. v.*



*Desper*, 101 U.S. 332, 337 (1879). Similarly this Court has held that where inventors claim as their invention a process, the patent "is not and cannot be on the result,—and the scope of their right is limited to the means they have devised and described as constituting the process." *Minerals Separation Ltd. v. Butte & Superior Mining Co.*, 250 U.S. 336, 349 (1919).

Here, respondent's claim recites use of a "pH from approximately 6.0 to 9.0." Pet. 5. The question that arises, therefore, is whether persons of skill in the art would understand that use of a pH of 5.0 would be an insubstantial difference from use of a pH of 6.0. The plain language of the claim does not provide a conclusive answer. The word "approximately" introduces some flexibility and certainly demonstrates that the inventors did not exclude all pH values below 6.0. Cf. *Keystone Bridge Co. v. Phoenix Iron Co.*, 95 U.S. (5 Otto) 274, 275-76 (1877) ("[w]ords cannot show more plainly that the claim of the inventor does not extend to any other eye-bars or chords").

Thus, to resolve the issue, resort must be had to the prosecution history and prior art, and the extent to which persons of skill in the art would deem it obvious to substitute different pH ranges. In this case, these factors all demonstrate that a "pH from approximately 6.0 to 9.0" (Pet. 5) does not permit the patentees to treat a pH of 5.0 as equivalent to 6.0.

**2. Prosecution history estoppel is a vital public basis for determining the proper scope of the invention.**

It is necessary in any infringement analysis to consider the public, written record of what occurred between the patentee and the PTO. The patentee, when construing his or her claims, must be estopped from presenting an interpretation of the scope of the invention that contradicts positions taken before the PTO. This Court has long found that

[a] comparison of the patent as granted with the application very conclusively establishes the limits within which the patentee's claims must be confined. He is not at liberty now to insist upon a construction of his patent which will include what he was expressly required to abandon and disavow as a condition of the grant.

*Sutter v. Robinson*, 119 U.S. 530, 541 (1886). See also *Schriber-Schroth Co. v. Cleveland Trust Co.*, 311 U.S. 211, 220-21 (1940); *Keystone Driller Co. v. Northwest Eng'g Corp.*, 294 U.S. 42, 48-49 (1935); *Smith v. Magic City Kennel Club, Inc.*, 282 U.S. 784, 799-90 (1931); Arthur H. Swanson, *A Discussion of the Application of the Doctrine of Equivalents in the Graver v. Linde Case*, 33 J. Pat. Off. Soc'y 19, 21-22 (Jan. 1951) ("The Supreme Court has . . . ruled repeatedly that claims surrendered by amendment in the Patent Office may not be recaptured by recourse to the Doctrine of Equivalents.").

Here, to overcome the PTO's rejections, the inventors affirmatively amended their claims to add the limitation of a pH range "from approximately 6.0 to 9.0." Pet. 5. The Federal Circuit concluded that this amendment was irrelevant, because it was made only to avoid rejection based on a patent that disclosed a process operating at pH levels above 9.0. Pet. App. 32a. But, as this Court has made clear, such an amendment establishes that the pH range is a material element of the claim and that variations from the specified range are presumptively substantial. "The applicant having limited his claim by amendment and accepted a patent, brings himself within the rules that if the claim to a combination be restricted to specified elements, all must be regarded as material." *Magic City Kennel Club*, 282 U.S. at 790. Accordingly, in this case the patentee's conduct before the PTO indicates that variations from a pH of 6.0 must be deemed to be material in any determination of equivalence, particularly in view of the fact that, under the pH scale, a single digit reflects a

ten fold difference in the level of acidity. Pet. 4 n.3. Certainly, a second inventor should be able to rely upon this history in deciding whether to proceed with a new process that uses a lower pH level.

### 3. *Prior art limitations restrict the sweep of the patent claims.*

Related to prosecution history estoppel is the limitation placed on an invention in light of the prior art. The patentee cannot claim an invention that would have been unpatentable during the prosecution stage. Thus, an element is not equivalent if its substitution in the claim would invalidate the claim in light of prior art. "[I]t is well settled that the claim as allowed must be read and interpreted with reference to . . . the prior state of the art, and cannot be so construed as to cover either what was rejected by the Patent Office or disclosed by prior devices." *Computing Scale Co. of Am. v. Automatic Scale Co.*, 204 U.S. 609, 617 (1907) (quoting *Hubbell v. United States*, 179 U.S. 77, 80 (1900)) (emphasis added).<sup>13</sup>

Similarly, the patent's status in light of the prior art is relevant to the breadth of construction of its claims. See, e.g., *Minerals Separation*, 250 U.S. at 345 (as

<sup>13</sup> One approach courts have used to conduct a prior art analysis is to create a

*hypothetical* patent claim, sufficient in scope to *literally* cover the accused product. The pertinent question then becomes whether that hypothetical claim could have been allowed by the PTO over the prior art. . . .

Viewing the issue in this manner allows use of traditional patentability rules and permits a more precise analysis than determining whether an *accused product* (which has no claim limitations on which to focus) would have been obvious in view of the prior art.

*Wilson Sporting Goods v. David Geoffrey & Assocs.*, 904 F.2d 677, 684 (Fed. Cir.), *cert. denied*, 498 U.S. 992 (1990).

"patentees came late into the field" of "fully developed" prior art, "the scope of their right is limited to the means they have devised and described"); *Continental Paper Bag Co. v. Eastern Paper Bag Co.*, 210 U.S. 405, 415 (1908) ("the range of equivalents depends upon and varies with the degree of invention"); *Duff v. Sterling Pump Co.*, 107 U.S. 636, 639 (1882) ("in view of the state of the art, the invention must be restricted"); *Water-Meter*, 101 U.S. at 336 ("[t]he patent, as it stands, occupies very narrow ground"); *Keystone Bridge*, 95 U.S. at 278-79 (a court "may . . . resort to prior use and the general history of the art . . . to restrain [the patent's] construction").

A patentee's competitors will typically be familiar with the prior art, and will be able to recognize the breadth or narrowness of the invention. Judicial recognition of this factor will thus facilitate competitors' evaluations of the boundaries of inventions. Here, while there is no indication that respondent's claim would have been invalid had it recited a pH of 5.0, it is clear from the PTO's repeated rejection of the patent application that respondent's invention is a narrow one in a crowded field. The narrowness of the invention would strengthen a competitor's view that a pH value of 5.0 is substantially different from a pH value of "approximately 6.0" (Pet. 5), further militating against a broad construction of the claims.

### 4. *Obvious substitutes must be included within the equivalence analysis.*

The constellation of infringing equivalents should encompass substitutes known to one skilled in the art. In *Winans*, the Court concluded that an inventor's claims should not be unnecessarily restricted because it is a "reasonable presumption" that "having a just right to cover and protect his whole invention, he intended to do so." 56 U.S. (15 How.) at 341. Thus, where it would be



obvious to a person of ordinary skill to substitute one material or device for another recited in a claim that combines several known materials or devices, the claim is properly construed to encompass this merely colorable or insubstantial difference. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 594, 609 (1950) ("An important factor is whether persons reasonably skilled in the art would have known of the interchangeability of an ingredient not contained in the patent with one that was."). See also *Clough v. Barker*, 106 U.S. 166, 178 (1882); *Imhaeuser v. Buerk*, 101 U.S. 647, 656 (1879) ("the substitution of the one for the other cannot be regarded as invention").<sup>14</sup>

In this case, use of a pH of 5.0 cannot be considered a substitution that would have been obvious to one skilled in the art. One of the co-inventors testified that the claimed process could work to separate impurities at pH values as low as 2.0, but that any solution with a pH below 5.0 would cause "tremendous foaming problems." Pet. App. 62a (Plager, J., dissenting). This Court's precedents make clear that the substitution of an unclaimed material that causes "tremendous problems" for a claimed substance that does not cause such problems simply cannot be considered an "obvious" equivalent. See, e.g., *Minerals Separation*, 250 U.S. at 353 ("It is difficult to see how a process so wasteful and

<sup>14</sup> The majority below, citing *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30 (1929), correctly concluded that the range of infringing elements should not be limited solely to those substitutes known when the patent issued. Pet. App. 31a. Support for the notion that equivalent infringement includes equivalents unknown at the time of the patent has a historical basis. In *Graver Tank*, "the Supreme Court recognized an old principle . . . stated by Robinson in his 'Treatise on the Law of Patents,' as follows: ' . . . it (the equivalency) must have been known as such at the date of the patent, or have since become known without the exercise of inventive skill.'" Arthur H. Swanson, *A Discussion of the Application of the Doctrine of Equivalents in the Graver v. Linde Case*, 33 J. Pat. Off. Soc'y 19, 22 (Jan. 1951) (footnote omitted) (emphasis added).

inefficient as that of the respondent . . . can be other than substantially different from that of the petitioners.").

#### 5. *Intent of the infringer is irrelevant to determining liability.*

The above-listed factors provide objectivity and greater certainty in the determination of patent infringement by equivalents. As a necessary adjunct, it is important to eliminate subjective factors from the liability analysis, specifically the element of intent. The doctrine of equivalents is part of construing claims, and if the claim language is to provide notice as to the scope of the invention, the meaning of the language cannot vary depending upon the intent of various infringers. A patentee should not face the possibility of different answers to the question of infringement of liability for different defendants.

Furthermore, there is no statutory basis for the proposition that a patentee's right to exclude should hinge on the intent of the infringer. The majority below correctly noted that "[a] patent owner may exclude others from practicing the claimed invention, regardless of whether infringers even know of the patent" (Pet. App. 12a), and that a defendant may infringe "without intending, or even knowing it; but he is not on that account, the less an infringer." *Id.* (quoting *Parker v. Hulme*, 18 F. Cas. 1138, 1143 (C.C.E.D. Pa. 1849) (No. 10,740)).<sup>15</sup> Similarly, there is likely to be little difference in intent between a defendant that intends to copy a patent with only minor differences and one that intends to design around the patent—in each case, the dispositive question will be whether the differences introduced by the defendant are in fact substantial, and not the nature of the intent that produced them. Thus, as Justice Jackson sagely observed in an earlier patent case: "The less legal rights depend on someone's state of mind, the better."

<sup>15</sup> Intent may be relevant, of course, to an assessment of damages once liability is established. 35 U.S.C. § 284.

*Mercoïd Corp. v. Mid-Continent Inv. Co.*, 320 U.S. 661, 679-80 (1944) (Jackson, J., dissenting).

\* \* \* \*

The use of these objective criteria and the elimination of intent as a factor in determining liability for infringement should build more certainty into the law on infringement while remaining consistent with Congress's intent to provide broad protection to patent rights.

**C. In A Jury Trial, The Judge Should Determine The Scope Of The Invention.**

As IPO has argued elsewhere, it is the proper role of the judge to determine claim construction. See Brief *Amicus Curiae* of Intellectual Property Owners in *Markman v. Westview Instruments, Inc.*, No. 95-26 (U.S. argued Jan. 8, 1996). The rationale for this approach derives from the nature of the public right created by Congress in the patent laws and Congress's reliance upon the Patent and Trademark Office to ensure that each invention complies with the requirements of the patent laws. See 35 U.S.C. §§ 111, 112, 131; 37 C.F.R. § 1.104 (a). See also *Graham v. John Deere Co.*, 383 U.S. 1, 18 (1966). Because the patent confers a significant governmental grant of exclusivity, it is vital that the metes and bounds of the grant be clear. Moreover, given the highly structured nature of the patentability decision made by the PTO as an expert agency, the Federal Circuit's analogy in *Markman* between patent construction and statutory interpretation is precisely on point. *Markman*, 52 F.3d at 987. In both situations it is vital that the scope of the protected right be certain and consistent. Such consistency is only possible if the issue is decided by the trial court with *de novo* review by an appellate court.

Defining the scope of equivalents is, without question, part of claim construction. Accordingly, the judge should

determine the scope of the invention in a patent infringement suit based on the doctrine of equivalents. Carving out this role for the judge is consistent with the Court's opinion in *Winans*, where the respective roles of judge and jury in a patent infringement case were defined:

On such a trial, two questions arise. The first is, what is the thing patented; the second, has that thing been constructed, used, or sold by the defendants.

The first is a question of law, to be determined by the court, construing the letters-patent, and the description of the invention and specification of claim annexed to them. The second is a question of fact, to be submitted to a jury.

56 U.S. (15 How.) at 338.<sup>16</sup> See also *Coupe v. Royer*, 155 U.S. 565, 579 (1895) (following Robinson's treatise on patents: "the court defines the patented invention as indicated by the language of the claims; the jury judge whether the invention so defined covers the art or article employed by the defendant").

In nevertheless ruling that the doctrine of equivalents should be applied by juries, the majority below relied on this Court's statement in *Graver Tank* that "[a] finding of equivalence is a determination of fact." Pet. App. 14a (quoting *Graver Tank*, 339 U.S. at 609). But, as the majority itself acknowledged, a finding of infringement, whether literal or under the doctrine of equivalents, is always a question of fact. *Id.* (citing *Winans*, 56 U.S. (15 How.) at 338). This characterization of the ultimate finding does not dictate that juries must determine the scope of equivalents, any more than it dictates that, in cases involving literal infringement, juries must construe the claims. *Winans* makes clear that the construction of patent claims, including the determination of equivalents,

<sup>16</sup> However, even if the jury is assigned the task of determining the scope of the invention, jurors likewise need guidance to promote certainty and consistency in verdicts. The objective criteria proposed would instruct a jury as well as a judge.



is a question of law for the courts, even though a jury may ultimately make the factual determination that a defendant infringes the properly construed claims. This Court did not abandon this division of responsibility in *Graver Tank*, a case in which both issues were decided by the trial court.

\* \* \* \*

The outcome in this case illustrates that the lack of objectivity in an infringement analysis often leads to the wrong result. In particular, the Federal Circuit erred in failing to give proper consideration to the PTO's rejections of respondent's applications, the materiality of the amendment respondent incorporated in response to those rejections, the narrowness of the invention in light of the amendment and the prior art, and the non-obvious nature of substituting a pH value of 5.0 in light of the inventors' own difficulties in developing the patented process. This failure to analyze these objective factors led to the majority's conclusion that the inventors' amendment "to avoid the prior art disclosure of a process operating at a pH higher than 9 does not bar Hilton Davis from asserting equivalency to Warner-Jenkinson's process sometimes operating at a pH below 6." Pet. App. 32a.

Furthermore, this case reveals the inherent problem that arises if the issue is left to the unbounded discretion of the jury based on nothing more than an instruction that "substantial" deviations from a claim that has not been precisely defined by the court do not infringe. This kind of approach provides essentially no guidance to a lay jury and subjects the alleged infringer to *post hoc* determinations that are utterly unpredictable. What is vital to avoid this serious problem is that the judge decide precisely the scope of the claims based on the objective, publicly available factors identified above—claim language, prosecution history, and prior art. The jury then determines what the allegedly infringing device or process is or does and whether it falls within the claim as defined by the court. It seems likely that this approach will

permit a significantly larger number of patent infringement issues to be decided on summary judgment and clearly will enhance certainty in patent law.

For example, in this case there seems to be no dispute that petitioner does not use a pH above 6.0. Thus, once the claim is properly construed as limited to a pH range between 6.0 and 9.0, or as not extending to pH values of 5.0 and below, there is nothing left for the jury to decide. The jury would only have an issue to decide if there was a dispute between the parties concerning the pH levels petitioner actually uses. In that case the jury clearly would decide that specific question. But reliance on the jury for that issue in no way undermines the consistency and clarity that arises from the court's determination of the precise definition of the claim based upon the objective and publicly available information cited above.

#### CONCLUSION

For all the foregoing reasons, the judgment of the court of appeals should be reversed.

Respectfully submitted,

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## **APPENDIX**



## APPENDIX

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